PART 3

DESIGN PROPOSAL
STUDY AREA ANALYSIS

LOCATION

The study area is located in the southern part of Hexi New Town, on a peninsula bordered by the Yangtze river in the northwest and the Qinhuai New River in the south. Two metro lines, line 1 and line 2, are currently operating in Hexi New Town. Several new lines are under planning and construction. Two of these new lines will run through the southern peninsula of Hexi New Town. The selected study area is in a 500 metre radius around a future metro station in the intersection of these two lines.

DISTANCE TO DOWNTOWN:

By car: 12.5km, 22 minutes in low traffic
By metro: 20 minutes
CURRENT LAND USE

The study area previously contained several villages with surrounding agricultural land. All buildings are currently being demolished in preparation for the planned expansion of Hexi New Town. While questions regarding the sustainability of this may arise, this question is not handled in this thesis. In this thesis, the land is therefore seen as undeveloped greenfield land. The study area is crossed by several rivers. Directly east of the study area are two blocks with large scale social housing projects. These high-rise buildings will contain 7700 apartments (Yun & Yehua, 2005). Since many of these residents rely on public transport, large movement flows between them and the new metro station are expected.
ROAD NETWORK
DEFINING OF STUDY AREA BORDERS

The road network in the immediate surroundings consists of the wide road grid network of Hexi New Town in the north, and the city ring road in the east. There may be issues with noise pollution coming from the ring road in the east. However, existing high-rise developments between the ring road and the study area are believed to reduce the noise levels. The road network proposed and that will define the study area limits is showed in the map to the right. The existing main road access leading northeast through the rest of Hexi New Town (the red line) is proposed to extend further south, creating the western border of the study area. The purple line is an extension of the already existing interchange with the ring road in the east. Two main roads are proposed to cut through the area leading to the centrally located metro station. This divides the area into four separate quadrants. Each of these quadrants have been designed and will be shown on the coming pages. By extending the already existing main roads, an area of around one square kilometre is created within them. The metro station is located in the middle of the area.

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**Study area**

- **8 lanes:** Main road leading to the rest of the peninsula
- **6 lanes:** Ring road around area
- **4 lanes:** Main roads within area

**Road network.** The current road network surrounding the study area, with suggested new roads.
LAND USE

This map shows the land use of the design proposal. The colours in the map are the official land use colours used in China. The design principles regarding diversity has been used to create a higher degree of land use mix compared to the surrounding developments. As in Hong Kong, commercial uses are concentrated in the central area surrounding the metro station. The central area is composed of mixed-use blocks. The mixed-use blocks are made up of podiums with commercial functions in the bottom floors and residential towers on top. Along some of the busiest streets, mixed-use is proposed on the ground floor of buildings. Further out are mainly residential areas and education functions. In the southwest is a large area reserved for medical uses, in the form of a hospital. Green wedges cut through the area from two sides. The west green area is a landscaped park, providing calm areas as well as room for playgrounds and other sport activities. The east green area has more open grass fields and provides room for sport activities such as football fields, tennis courts, swimming pool and basketball courts. Besides the two large open green spaces, there are also several smaller parks scattered throughout the area, also with room for playgrounds and other activities. Public squares are placed in the centre of development clusters.
STREET NETWORK

The street network in the proposal uses four different street types. The widest streets inside the area are the four lane main roads. The private residential compounds have their own internal street network which has not been designed in this proposal. Sections will be shown on the coming pages.

- **8 lane road bordering area**
  Main roads to other parts of the city. Not part of the detailed design.

- **6 lane road bordering area**
  Ring road around the study area. Not part of the detailed design.

- **Street type 1**
  Two main roads going through the area, intersecting in the middle of the area near the central podium. They are four lane streets with a separator in the middle. Bicycle lanes run along the sides next to wide sidewalks. Large trees are planted on both sides. No parking on the street. See detail of central podium area for section.

- **Street type 2**
  Small local street with two lanes. Bicycle lanes and sidewalks on each side. Trees planted on both sides. No parking on the street. See detail of southern quadrant for section.

- **Street type 3**
  Small local street with two lanes. No separate bicycle lanes. Cars should move very slow. Bicycles and cars share a calm traffic space. Parking on both sides of the street. Trees planted along both sides. See detail of central podium are for section.

- **Street type 4**
  Pedestrian street. No bicycles allowed. Small trees are planted along the street, with a sitting area around each tree. See detail of north quadrant for section.
ILLUSTRATION PLAN

The area is divided into four different quadrants. The north, south and east quadrants all have their own central square and a pedestrian street. The west area is dominated by a large park and a hospital. Each area has local services and schools within a short walking distance. At the edges of the areas, footbridges lead up to the central podium area and shopping mall. The two open green spaces are connected to each other and the central shopping mall with sloped footbridges and a river running below. The white spaces on the map are private residential compounds. Their interior is not designed in this proposal. On top of each podium is a private courtyard garden, which also are not designed in this proposal.
For scale reference: The towers on the central podium are 38 floors and 125 metres tall.
The central podium area consists of eight podiums. Five of them are interconnected with a footbridge system. Located around the central podium are several shopping malls. Directly connected to the central podium and shopping mall is a building for higher education as well as a youth activity centre similar to the one found in Chai Wan. The footbridge from the central podium leads to a large slope that goes down to the street level in front of the podium directly southwest of the college. Several footbridges converge on the western part of the central podium on the second floor. This part is outside and landscaped, creating a green link between the two large green spaces. Below this area flows a river. On the central podiums back side to the northeast is a parking garage and goods delivery area inside the podium, as well as a public transport interchange just outside. There are no building setbacks in the central area, creating an urban street scape of defined streets. The shops have their entrances directly on the sidewalk. A contrast from the existing developments of Hexi New Town where shops always have a large parking area between the sidewalk and the shop. A tall office tower is in the west part, providing many workplaces located next to transit,

Pedestrians can choose to walk on street level or to use the footbridges. Entrances to the central shopping mall and metro station are both on footbridge level and on street level, same as in all of the Hong Kong cases. Further out from the central podium area, all pedestrians descend to street level.
CENTRAL PODIUM AREA

The sections show the podium and footbridge system in the central podium area. The scale is large, but plenty of planted trees and small shops on the ground floors bring some human scale to the area. On top of the podium in the section is a private landscaped courtyard garden. Inside the podium is a small shopping mall and a parking garage. Two sections are enlarged, showing two of the street types in the area. One is a part of one of the two main streets crossing the area. It has four lanes with bicycle roads on the sides and wide sidewalks. The other is of a smaller local road with parking on the sides.

STREET TYPE 1: BUSY MAIN ROAD WITH BICYCLE LANES

STREET TYPE 3: LOCAL STREET WITH PARKING ON SIDES

SECTION THROUGH CENTRAL AREA

BIRD VIEW FROM SOUTH
NORTH QUADRANT

BIRD VIEW FROM NORTH

ILLUSTRATION PLAN: NORTH QUADRANT

STREET TYPE 4: PEDESTRIAN STREET

- Commercial uses & podium
- Public institutions and services
- Podium including parking garage
- Entrance to shopping mall and walled in residential areas
- Public square
- Pedestrian street
- Footbridge
- Pedestrian areas and ramps leading up to footbridges
- Wall
NORTH QUADRANT

Further out from the metro station podiums are not used. The north quadrant have several large walled in residential compounds on ground level, similar to those in the rest of Hexi New Town, though the block sizes are smaller. The thousands of residents living in the three compounds in the north part of the quadrant have their entrances converging on a small park. Here is the start of a pedestrian street that ends at the entrance to one of the shopping malls which is directly connected by footbridge to the central podium and metro station. Shops are placed along the pedestrian street. A diagonal connection is used to create the most direct route to the central podium. Outside the entrance to the shopping mall is a public square. Directly next to the square is a building containing a local market with small vendors selling fruits, vegetables, meat etc. Around it is several commercial buildings with offices and light industrial uses such as workshops. At the edge of the area are several schools of different levels as well as kindergartens. The yellow building in the middle is a community centre.
WEST QUADRANT

The west quadrant is dominated by a large park, a hospital and a police- and fire station. The park is landscaped with many planted trees, creating a green lunge for the whole development. A river flows through the park around several islands. The character of the park should be calm, but there still are some sport activities and playgrounds in the area. The more open space in the park will create an attractive alternative to using the more closed private courtyard gardens. On the north side of the park are two podiums with tall towers on top, framing the park.
SOUTH QUADRANT

The south quadrant uses a similar design as the north quadrant. A diagonal pedestrian street connects several large residential areas with a shopping mall, which is in turn connected to the central footbridge system. Residents can walk along the pedestrian street passing several shops, walk over the square in front of the shopping mall, and finally enter the indoor interconnected pedestrian system. East of this area is a large social housing development under construction. A large movement flow between it and the metro station is expected, with many of the residents walking through the pedestrian street. A park is located centrally in the area with some playgrounds and basketball courts. Here is also a large building containing cultural functions such as library and a community centre. The section below show one of the street types in the area, a local street with two car lanes and two bicycle lanes. The residential compounds are walled in and set back from the street, similar to existing developments in Hexi New Town.
SOUTH QUADRANT

BIRD VIEW FROM SOUTH
EAST QUADRANT

The east quadrant contains one of the large open green spaces. This green space has a more active character than the park in the west quadrant. It contains one full size football field and one smaller one. There are several tennis- and basketball courts as well as a public swimming pool. A river flows through the area connecting to another river in the west. Closer to the central area are podiums interconnected with footbridges. Similar to the southern quadrant, directly southeast of the east quadrant on the other side of the road is another existing large social housing development nearing completion, containing around 3500 apartments. Since many of these residents rely on public transport, a large movement flow is expected between this area and the metro station in the design proposal. Therefore a pedestrian street is proposed on the main movement flow between this development and the shopping mall which is connected to the central podium.
EAST QUADRANT

Social housing project under construction, containing around 3800 apartments
THE FIVE DS OF THE PROPOSAL

POPULATION DENSITY & DISTANCE TO TRANSIT

Same as in the case study of Hexi New Town, an average household size of 2.77 and an average apartment size of 90m² was used to calculate the population.

A majority of the population lives within 200 metres of a metro exit. All of the population lives within 500 metres (the whole compound is included if its entrance is within 500 metres). Just outside the study area are several developments with large amounts of people. The residents of the eastern social housing projects are expected to rely heavily on the new metro station in the study area. Large amounts of people are expected to walk along the proposed pedestrian streets to reach to central podium indoor pedestrian system.

DENSITY STATISTICS:

Population: 48142
Population within 500 metres: 24295
Population within 200 metres: 48142
Population density: 42735 persons/km² or 427 persons/hectar
Total number of dwelling units: 17380
Dwelling unit density: 154/hectar

*The whole population of an estate is included if its entrance is within the radius.
DENSITY: FLOOR AREA RATIO

The floor area ratios in the proposal are very high in the area surrounding the central podium and metro station. The values decrease further out from the station. The residential compounds on the edge of the study area have floor area ratios of around three while the central podiums have between seven to ten. The use of podiums greatly increases the floor area ratio in the central area.

The two large open green spaces and the low floor area ratios of the education blocks bring down the floor area ratio of the whole site. The floor area ratio of the entire site is 2.8.
**DIVERSITY & DESTINATION ACCESSIBILITY**

Commercial functions are concentrated in the central area with several connected shopping malls. Further out are smaller shops and other commercial uses on the ground floor of buildings. These shops have been placed where the heaviest pedestrian movement flows are expected, especially on the pedestrian streets.

Each area has a collection of services and commercial uses within a short 200 metre walk. A high destination accessibility is achieved. At the borders of the study area, the degree of land use mix is lower, with more residential functions. The land use mix increases closer to the central podium and metro station.

Several small public places such as parks and squares are found within each sub-area. Two large public places are in the form of open green spaces. This creates a series of small and large public places.
The block sizes are varying. Most blocks are between 1-2 hectares. Larger blocks are found especially on the edges of the north, west and south quadrants. The central podium is nearly three hectares but the block has many openings where pedestrians may pass.

**Area of the whole site:**
1.1 km² / 112.6 ha

**Total building plot area:**
73.2 ha / 65% of total area

**Total road surface area including sidewalks, green buffers and bicycle lanes:**
18.6 ha / 16% of total area

**Parks and other public places (not counting streets):**
20.8 ha / 18% of total area
DESIGN:
PEDESTRIAN NETWORK

The street network was already shown previously, so the analysis will move on to the pedestrian network.

An extensive pedestrian network is created using the podium and footbridge system of Hong Kong. The central area has an indoor pedestrian system consisting of shopping malls interconnected with footbridges. The pedestrian network in the central area is very fine-grained. Further out the blocks get larger and pedestrians may not pass through the private residential compounds.

Links are also provided to the surrounding developments. Large movement flows are expected especially from the social housing projects on the east side of the study area.
DESIGN:
PEDESTRIAN FLOWS

This map shows the anticipated main pedestrian movement flows. Commercial functions and public places are concentrated along these flows. All of the movement flows are expected to be a less than 10 minute walk, a convenient distance to the metro station. In the outer areas, pedestrians walk on street level. Closer to the central area pedestrians may choose to walk into one of the shopping malls, take an escalator up to the second floor, and walk indoors passing footbridges until finally reaching the metro station and central shopping mall. Another option is to stay on street level.
EVALUATION, DISCUSSION & CONCLUSIONS
TO WHAT EXTENT WERE THE AIMS OF THE DESIGN PRINCIPLES REACHED?

DENSITY & DISTANCE TO TRANSIT

Aim: Distribute densities according to their relation to transit. Concentrate developments in a 500 metre radius around the station, with the highest concentration in a 200 metre radius.

Result & Conclusions: The population density of the proposal is higher than the Hexi case, but much lower than that of Po Lam and similar developments in Hong Kong. While the population density does not differ greatly from the Hexi case, floor area ratios do. The proposal reaches a significantly higher floor area ratio than the Hexi case, although not quite as high as Po Lam’s levels. The higher floor area ratios in the proposal compared to the Hexi case meant that many more functions, such as commercial uses, could be added while still keeping a high population density.

The most apparent difference between the proposal and the Hexi case is how the density is organized. In the Hong Kong cases all of the population lives within 500 metres of mass-transit, with a high proportion of the population concentrated in a 200 metre radius. This is also the case for the design proposal. 100% lives within 500 metres and 50% within 200 metres of a mass-transit stop. In the Hexi case, only 48% lives within 500 metres and none within 200 metres.

The result is a built environment where density has been organized in relation to transit, according to TOD principles. As opposed to the existing situation, where metro stations are placed away from the highest population concentrations.

Proposal:
- Population density: 42735 persons/km² or 427 persons/hectar
- Population within 500 metres: 100%
- Population within 200 metres: 50%
- Dwelling unit density: 154/hectar
- Floor area ratio of whole site: 2.8

Po Lam:
- Population density: 111144 persons/km² or 1111 persons/hectar
- Population within 500 metres: 100%
- Population within 200 metres: 53%
- Dwelling unit density: 308/hectar
- Floor area ratio of whole site: 4.5

Hexi New Town District:
- Population density: 31843 persons/km² or 318 persons/hectar
- Population within 500 metres: 100%
- Population within 200 metres: 0%
- Dwelling unit density: 114/hectar
- Floor area ratio of whole site: 1.3

Chai Wan:
- Population within 500 metres: 100%
- Population within 200 metres: 41%

Heng Fa Chuen:
- Population within 200 metres: 100%
The proposal has a lower building plot area than the Hexi case. This has given more room for public places such as parks and squares. While the Hexi case has no public parks and squares, only private courtyard gardens, 18% of the total area of the proposal consists of public green spaces and squares. Besides the public places, the residential compounds and podiums in the proposal also have private courtyard garden, same as in the Hexi case.

**HEXI CASE**

**Building plot area:** 85%
**Parks and other public places:** 0%

**PROPOSAL**

**Building plot area:** 65%
**Parks and other public places:** 18%

The proposal has a lower building plot area than the Hexi case. This has given more room for public places such as parks and squares. While the Hexi case has no public parks and squares, only private courtyard gardens, 18% of the total area of the proposal consists of public green spaces and squares. Besides the public places, the residential compounds and podiums in the proposal also have private courtyard garden, same as in the Hexi case.

**AIM:** Move away from the current functional zoning paradigm in Hexi New Town and introduce a much more function integrated design where the land use is distributed according to its relation with transit. Provide more public places.

**RESULT & CONCLUSIONS:** The proposal reaches a high degree of land use mix, especially in the central area close to the metro station. Function are divided within each sub-district, and each district have a wide range of services and commercial uses within a short walking distance. The need to taking a car is much lower than in existing developments.

The land use maps on the right and on the next page clearly shows the difference in diversity between the proposal and existing developments. The land use in the proposal is integrated with transit, compared to the function separated character of existing developments.
Official Chinese land use planning colours are used:

- Yellow: Residential
- Orange: Education
- Brown: Mixed-use
- Blue: Commercial
- Green: Public green
- Pink: Public square
- Purple: Government
- Light green: Sport
- Blue: Water
- Red: Science park
- Dark green: Public square

Proposal

LAND USE OVERVIEW
RESULT & CONCLUSIONS: One of the greatest contrasts between the proposal and the existing developments is the pedestrian network. Although the superblocks of Hexi New Town are relatively small, at least when using Monson’s (2008) definition of 8-40 hectare superblocks, they are still so large that they discourage walking. Some blocks are more than 14 hectares, most of them are around 7 hectares. The map shows possible paths that pedestrians can take. They are not allowed to pass through the private walled in residential compounds. In the central area of the design proposal, around the metro station, pedestrians can pass freely through the indoor pedestrian system. This has created a very fine-grained pedestrian network compared to that of existing developments.

However, the level of accessibility of the Hong Kong cases could not be obtained. Although Hong Kong also have private residential compounds, they are not walled in to the same extent as is required in Nanjing, and can often be passed through by the public. In the proposal, mostly in the outlying areas, residential compounds had to be walled in and closed off to the public. The central area of the proposal does however have the same level of accessibility as in Hong Kong. The areas further out from the station are more similar to existing developments.

From a western point of view, the likely solution would’ve been to open up the closed compounds in order to increase accessibility. But this was found to not be possible in the Chinese context. The solution was instead found in the podium system, where pedestrians can pass through below the compound, in a shopping mall. And while the residential compounds not on podiums are still walled in, they were made smaller than those of existing developments. Because a higher floor area ratio was used, the same amount of residents could be placed in smaller blocks, and still have two guarded gates.

The result is a stark contrast with existing developments in terms of pedestrian accessibility.
DESIGN
STREET NETWORK

AIM: The aim was to reduce the focus on automobile infrastructure.

RESULT & CONCLUSIONS: The street network of the proposal has a totally different character from that of existing developments. Streets are much more narrow and more focus is put on pedestrian accessibility. There are also several pedestrian streets, something which is not found in the rest of Hexi New Town. One of the problems found in existing developments of Hexi New Town was the focus on car infrastructure, using very wide roads. Despite this, the proposal actually have the same proportion of road surface as the Hexi case. This is because the blocks are much smaller, which makes the street network more fine-grained.

HEXI CASE PROPOSAL

<table>
<thead>
<tr>
<th>Road surface area: 15%</th>
<th>Road surface area: 16%</th>
</tr>
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Even though the road surface area is the same, a much higher proportion of it is reserved for sidewalks and bicycle lanes. The use of narrow streets also creates a different character from existing developments. The character is a more intimate street scape, where the pedestrian can feel less exposed than in the wide open roads of existing developments. Drivers can also have less of the feeling of “owning” the road. The 8-12 lane roads of Hexi New Town creates a sense of the car as the dominating force. Whereas in the proposal, pedestrians come in the first place.
FUTURE POSSIBILITIES

This thesis focused on integrating land use with transit and creating a dense, diverse and pedestrian friendly environment in order to create a less car dependent neighbourhood. There are however other interesting questions related to TOD begging further research. The TOD concept and its design principles synthesized in this thesis could continue to be used in further expansions of Hexi New Town along the new metro lines extending southwest. Although questions could arise about the quality of an urban landscape made up purely of Hong Kong style transit-oriented developments. Perhaps Nanjing could benefit from a more varied approach, with a combination of low-density low-rise areas and high-rise transit-oriented areas such as the proposal? Since the TOD concept utilized in this proposal uses less land than the current structure, more space can be freed up for agricultural uses, or to open up possibilities for preserving existing structures and villages. The proposal is planned on an area which used to be occupied by villages and agricultural land. The rest of the peninsula to the southwest contains more villages and agricultural land. A question for further research could be how to utilize the TOD concept of building very dense around transit in order to keep the city from sprawling out like a pancake in all directions, consuming all existing structures in its wake.
RESULT: THE NANJING TOD MODEL

There are many similarities between Hong Kong and Nanjing. They have the same population size, similar culture and similar architecture in the form of using mostly high-rise residential buildings. There are however some ways in which the model of TOD synthesized in this thesis differs from the model found in the case studies of Hong Kong.

Much of this was discussed in the design principles chapter, for example regarding density levels. The Nanjing model of TOD is proposed to have lower density than Hong Kong TOD neighbourhoods, but still higher than those of surrounding developments in Hexi New Town. The technique of differentiated density, as outlined by Zhang (2007), was used in this design proposal. It refers to the principle of creating very high density in close proximity to the station, and lowering it as the distance from the station increases. In Hong Kong, the density does not vary as much as in this proposal, the buildings are more or less the same height in the whole developments. This is in big part due to the topographic conditions of Hong Kong, much of Hong Kong is consists of mountains and open water, there is a lack of land and many developments are built on reclaimed land from the ocean. Nanjing does not share these topographical difficulties. Hexi New Town is made up of flat land. It was no need for the excessive density levels of Hong Kong and the technique of differentiated density could be utilized, as can be seen especially in the floor area ratio map on page 104.

Another difference is the use of walls in the Nanjing TOD model. As described in the literature review on page 26, walls are and always have been an integral part of the Chinese city. This is also implemented in the design proposal. The residential blocks are encircled by walls. Each residential block, or gated community, has two entrances with guards. While gated communities and guarded entrances are also found in Hong Kong, walls are not as important. It is possible to pass through most blocks. This is not possible in Nanjing. Accessibility had to be provided by using the podium system. The podium system is heavily utilized in Hong Kong and was also used in the Nanjing TOD model in order to provide increased accessibility and a high density around the station. The outer blocks in the proposal are much more similar to the already existing surrounding developments, this type of block was not found in Hong Kong. As a result of using these enclosed rather large blocks, the Nanjing TOD model has a lower level of pedestrian accessibility compared to Hong Kong TOD neighborhoods. However, as can be seen on page 113, the accessibility is still much higher than in surrounding developments.

The importance of southern orientation is considered in the Nanjing TOD model. In China, southern orientation of residential buildings is important and usually a requirement, as described in the literature review on page 26. Building orientation is not nearly as important in Hong Kong. In the design proposal, all buildings are orientated towards the south. Commercial buildings does not have an orientation requirement and was placed more freely. Amount of sunshine is also an important aspect in China. There are requirements for how much sunlight each apartment has to be able to receive. This issue is less important in Hong Kong, where buildings are placed extremely tightly together. In the design proposal, there are much more space between the residential towers than in Hong Kong. However, they are still placed much closer together compared to surrounding developments, and than the Nanjing planning law stipulates.

With the exception of these aspects, the TOD model found in the Hong Kong case studies is argued to be mostly applicable in Nanjing. However, there is one important question that needs further research. That is the question of car ownership and parking availability. Car ownership in Hong Kong is very low, and there is a low availability of parking spaces. Car ownership in Nanjing is currently relatively low, similar to Hong Kong levels, but it is however rising very rapidly (Campanella, 2008). Providing a low amount of parking spaces, as in Hong Kong, might be problematic in China and Nanjing. The car is the dream of most middle class families in China. More on this on the next page.

In conclusion, the TOD model synthesized in this thesis is only one of many possible solutions to the problem of increasing car-dependence in Chinese cities today. It is not to be seen as an ideal solution, but rather as a material for initiating discussion. To reach a truly sustainable urban form, a subject of much debate, many more aspects need to be included and considered. Using tools of visualization, this thesis has provided the point of view from an urban designer on the possibilities of TOD in China and Nanjing.
CLOSING DISCUSSION - WAS THE MAIN AIM FULFILLED? WHAT ARE THE MAIN OBSTACLES FOR FULFILLING IT?

The main aim of this thesis was to design a new neighbourhood in Hexi New Town, according to the transit-oriented development principles of Hong Kong. The long term aim is to reduce car dependence. Judging from the available research on transit-oriented developments in Hong Kong, and from the comparisons just made, it is argued that the proposal should make choosing to take transit over the car a more likely option for residents living in the designed TOD neighbourhood than for those in the existing developments of Hexi New Town. In order to be able to implement Hong Kong design principles fully, Nanjing planning regulations need to be changed. The current shape of the regulations mean that building anything but Hexi New Town style car-oriented developments is quite difficult.

The situation in China does differ in many ways from Hong Kong. The proposal aims to put the pedestrian and its accessibility to transit in the first place, over the current auto-oriented environment in Hexi New Town. The reality however is that in today's China, the car is the undisputed master of the streets, and judging from the available research on the topic this will continue to be so, at least so long as the economy keeps up its current rate of growth. For more insight into this, reading Campanella (2008) and the chapter, Driving the Capitalist Road, is recommended. In it, Campanella notes that: Given that automobile ownership is also encouraged by the central government as a means of stoking GDP, it is hardly surprising that China has become the fastest growing car market in the world. Despite the relatively high costs of ownership and maintenance, a car is the ultimate consumer dream today for millions of Chinese, and few things confer prestige as surely as a new luxury sedan (pp. 217). He further discuss the possible reasons for this: In a society where travel was once highly restricted and much of life circumscribed by the state, driving your own car - wherever and whenever you wish - offers a compelling sense of agency and self-determination (pp. 218).

Most cars seen on Chinese roads today are big luxury cars. In Shanghai, it is a common sight to see a long queue of cars to the parking garage of a downtown shopping mall, often waiting more than half an hour or more just for an expensive parking place. It seems people are willing to do this instead of taking the metro, which has a station directly below the shopping mall. The metro system in Shanghai is very extensive, it has never been easier to make due without a car. Yet, people still choose to wait in line for a parking place. The government seem to be ambivalent in handling the issue of rising car ownership and sustainability. While heavy investments are being made in mass transit, consuming luxury products, and especially cars, is also promoted as a way to keep the economy growing. There is always the difficult choice between economic growth and sustainability. A change of direction is needed. China is building its way into a structure made for the car. This kind of structure is ill-equipped for adapting to future changes.

This fact could create problems for actually realizing Hong Kong TOD strategies, in Hexi New Town, and the possible effectiveness of them, as it is an area mostly advertised for the middle class. Real estate brochures shows this clearly, usually depicting large infrastructure projects and the carefree car life. It is most likely so that simply designing a TOD neighbourhood cannot by itself lead to the desired outcomes. Many changes need to be made, both in government policies and in the people's lifestyle. The TOD concept investigated and synthesized in this thesis is just one component. But it is argued to be an important one. By building in this way it is believed that Hexi New Town will be more adaptable to future changes, and that even though people may own cars, taking the metro should be made as convenient as possible. Instead of just simply making it as easy as possible for car owners as is the case today.
REFERENCES

PRINTED SOURCES


Hong Kong Census Department. (2012). Hong Kong Census 2006. Hong Kong: Hong Kong Census Department.


**ELECTRONIC SOURCES**


**MAP MATERIAL**

Hong Kong CAD files received from the Hong Kong Planning Department. All 3D models and analysis maps of Hong Kong are based on these CAD files.

Nanjing CAD files and land use maps received from the Nanjing Planning Bureau.

Satellite photos of Hong Kong and Nanjing were retrieved from http://www.baidu.cn

**PHOTOS**

With the exception of the title page photo, all photos were taken by the author.